

The invention relates to a method for operating an underground gas reservoir, wherein a fluid is supplied to and discharged from said gas reservoir. A probe group of at least two probes is used for supplying and discharging the medium which flows through said probe group during introduction and discharge, each of the at least two probes is allocated to a storage layer (P_1 - P_N) and is flow-connected to the gas reservoir via the respective probe, the medium having a pressure at said gas reservoir. The flow rate of the medium is adjusted in each of the at least two probes on the basis of set values. According to the invention, the set values (S_1 - S_N) are determined in such a way that the difference between the probe flow pressures (p_{F1-2} , p_{F2-N} , p_{FN-1}) of the medium of the probe group (2_1 - 2_N) is kept to a minimum. The invention also relates to a control device for operating an underground gas reservoir. The invention thus provides a method and a control device for operating an underground gas reservoir which substantially facilitates the control of the operation of the gas reservoir by a reservoir engineer during the introduction and discharge processes and allows an optimal use of the gas reservoir with improved operational safety.